POTATO LEAFHOPPER

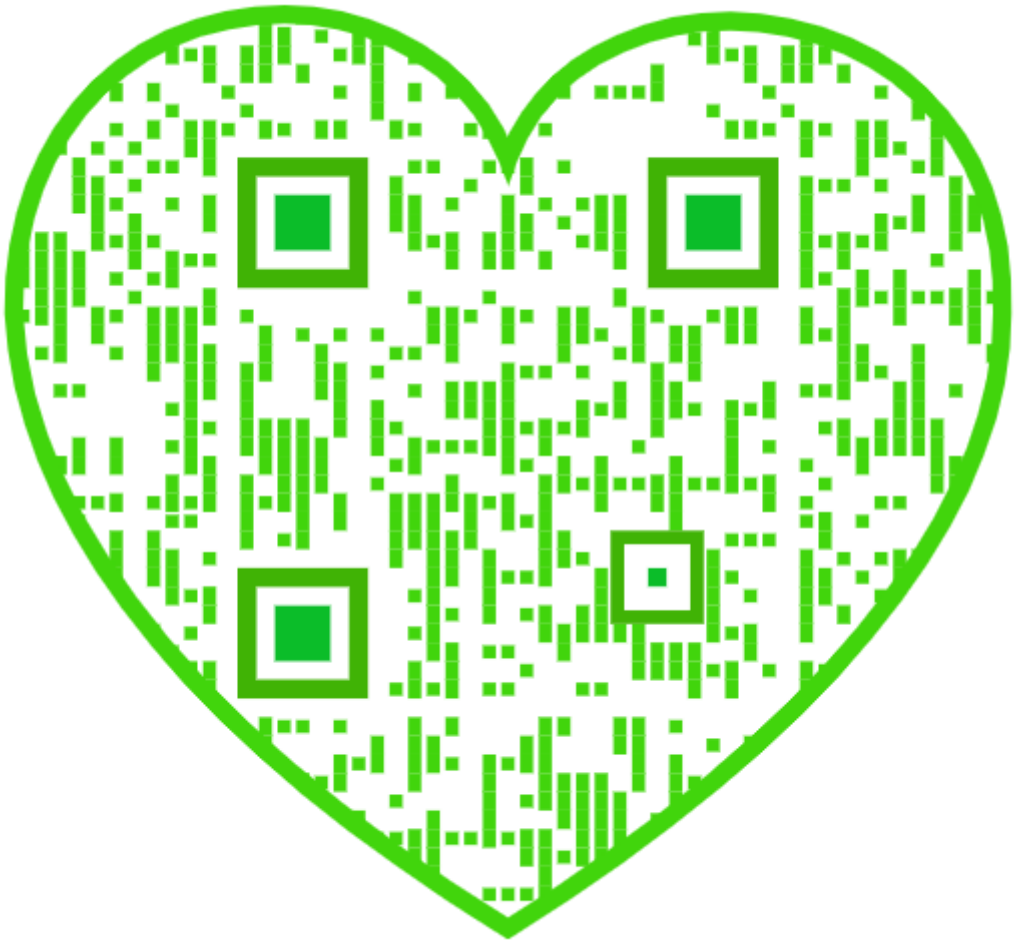
MARY F. BENSON

a, Adult leafhopper; *b*, nymphs (or young leafhoppers); *c*, part of a potato plant showing hopperburn injury caused by the feeding of leafhoppers, the upper surface of the leaves showing the typical upcurled brown tips and margins. (*a* and *b* about 14 times natural size; *c* about three-fourths natural size.)

(See other side for life history and control)

Bureau of Entomology and Plant Quarantine
United States Department of Agriculture

Picture Sheet No. 8



POTATO LEAFHOPPER

(*Empoasca fabae* (Harr.))

Injury and Life History

The potato leafhopper is one of the most important insect enemies of the potato in the Eastern States. In addition to potato, however, many other kinds of plants are attacked by it. The young forms, known as nymphs, as well as the adults, feed by sucking the plant juices. On potato plants their feeding causes a diseased condition called hopperburn, which results in serious losses.

Adults of the potato leafhopper appear each year in the North in April or May, and, since they have never been found during the winter in the North, it is supposed that they migrate from the South. During the early part of June they move in large numbers to potato fields. Eggs are deposited in the tissue of the potato plant. In about a week these eggs hatch into wingless nymphs, which feed upon the under surface of the leaves. The nymphs pass through five stages and become winged adults in from 10 to 14 days. Under normal conditions these adults begin egg laying in 5 or 6 days after maturing. The period from egg to egg is approximately 1 month.

Control

To control the leafhopper and prevent hopperburn, spray with bordeaux mixture (4-6-50 formula). This is prepared with 4 pounds of copper sulfate (bluestone), 6 pounds of high-grade hydrated lime, and 50 gallons of water. Dissolve the copper sulfate in a wooden or earthenware vessel by suspending the crystals just below the surface of the water. Dilute with one-half the water in the spray tank (25 gallons in this case). Mix the lime with a small quantity of water, and then add the other half of the water (25 gallons). Pour this into the copper sulfate solution and mix thoroughly. For more detailed instructions, refer to your county agent, State experiment station, or the United States Department of Agriculture. Dry bordeaux mixture, which requires only the addition of water, may be purchased in convenient packages, but the fresh-mixed spray described is more satisfactory.

Copper-lime dust may be used, but it is not so effective as the spray. To prepare the dust, place 1 pound of monohydrated copper sulfate and 4 pounds of hydrated lime in a drum that can be tightly closed, then roll the drum on the ground for at least 5 minutes, tilting it on end at frequent intervals. Ready-mixed copper-lime dusts can be obtained from insecticide dealers.

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